

## Claims

- [c1] 1.A maintenance management system for a given field asset comprising:  
a portable computer with communication capability disposed on the field asset and adapted to store a maintenance history for the given field asset and further adapted to retrieve at least one of a plurality of maintenance information corresponding to the given field asset; and,  
a communication network coupled to the portable computer and to at least one source of maintenance information to provide the at least one of a plurality of maintenance information for use in servicing the given field asset.
- [c2] 2.The system of claim 1 wherein the maintenance information comprises at least one of maintenance instructions, technical documentation for the field asset, repair and maintenance history records, and maintenance and repair status.
- [c3] 3.The system of claim 1 further comprising an on-board computing device further adapted to monitor operational parameters of the field asset and to communicate the operational parameters to the communication network.
- [c4] 4.The system of claim 3 wherein the portable computer and the on-board computing device are selected to withstand the environmental conditions of the field asset.
- [c5] 5.The system of claim 1 wherein the portable computer is further adapted to be removable from the field asset and configured to interface with the communication network via the on-board computing device in a wireless manner.
- [c6] 6.The system of claim 1 wherein the portable computer is configured to periodically query the communication network for at least one of maintenance instructions and updates to its technical information.
- [c7] 7.The system of claim 1 wherein the communication network is configured to import maintenance information from at least one of the sources.

- [c8] 8.The system of claim 1 wherein the portable computer is further adapted to permit service personnel to select maintenance instructions and record maintenance activities for the field asset.
- [c9] 9.The system of claim 1 wherein the portable computer is adapted to provide feedback of completion of a repair action to the communication network.
- [c10] 10.The system of claim 1 wherein the maintenance information comprises multimedia information.
- [c11] 11.The system of claim 10 wherein the multimedia information comprises at least one of still and video images, text instructions, schematics, drawings, instant messaging instructions and audio instructions.
- [c12] 12.The system of claim 1 wherein the communication network is coupled to at least one of a customer center, a service center, a parts requisition center and a configuration database.
- [c13] 13.The system of claim 1 wherein the portable computer is adapted to link to a bar code reader to decode bar-coded information during execution of a repair action.
- [c14] 14.A maintenance management system for a given field asset comprising:  
an on-board computing device disposed on the field asset and adapted to store a maintenance history for the given field asset and further adapted to retrieve at least one maintenance instruction corresponding to the given field asset;  
a plurality of sources of maintenance instructions; and,  
a communication network coupled to the on-board computing device and to the plurality of sources of maintenance instructions to provide the at least one maintenance instruction for use in servicing the given field asset.
- [c15] 15.The system of claim 14 wherein the maintenance instructions comprise at least one of maintenance instructions, technical documentation for the field asset, repair and maintenance history records, and maintenance *and repair*

status.

- [c16] 16. The system of claim 14 wherein the on-board computing device is further adapted to monitor operational parameters of the field asset and to communicate the operational parameters to the communication network.
- [c17] 17. The system of claim 14 wherein the on-board computing device is selected to withstand the environmental conditions of the field asset.
- [c18] 18. The system of claim 14 wherein the on-board computing device is further adapted to be removable from the field asset and configured to interface with the communication network in a wireless manner.
- [c19] 19. The system of claim 14 wherein the on-board computing device is configured to periodically query the communication network for maintenance instructions.
- [c20] 20. A method for maintenance management of a given field asset comprising:  
storing a maintenance history on a computing device disposed on the field asset;  
periodically querying a remote communication network for required maintenance events for the field asset;  
retrieving the required maintenance events from the remote communication network for use in servicing the field asset; and,  
updating the communication network from the computing device upon completion of the required maintenance events.